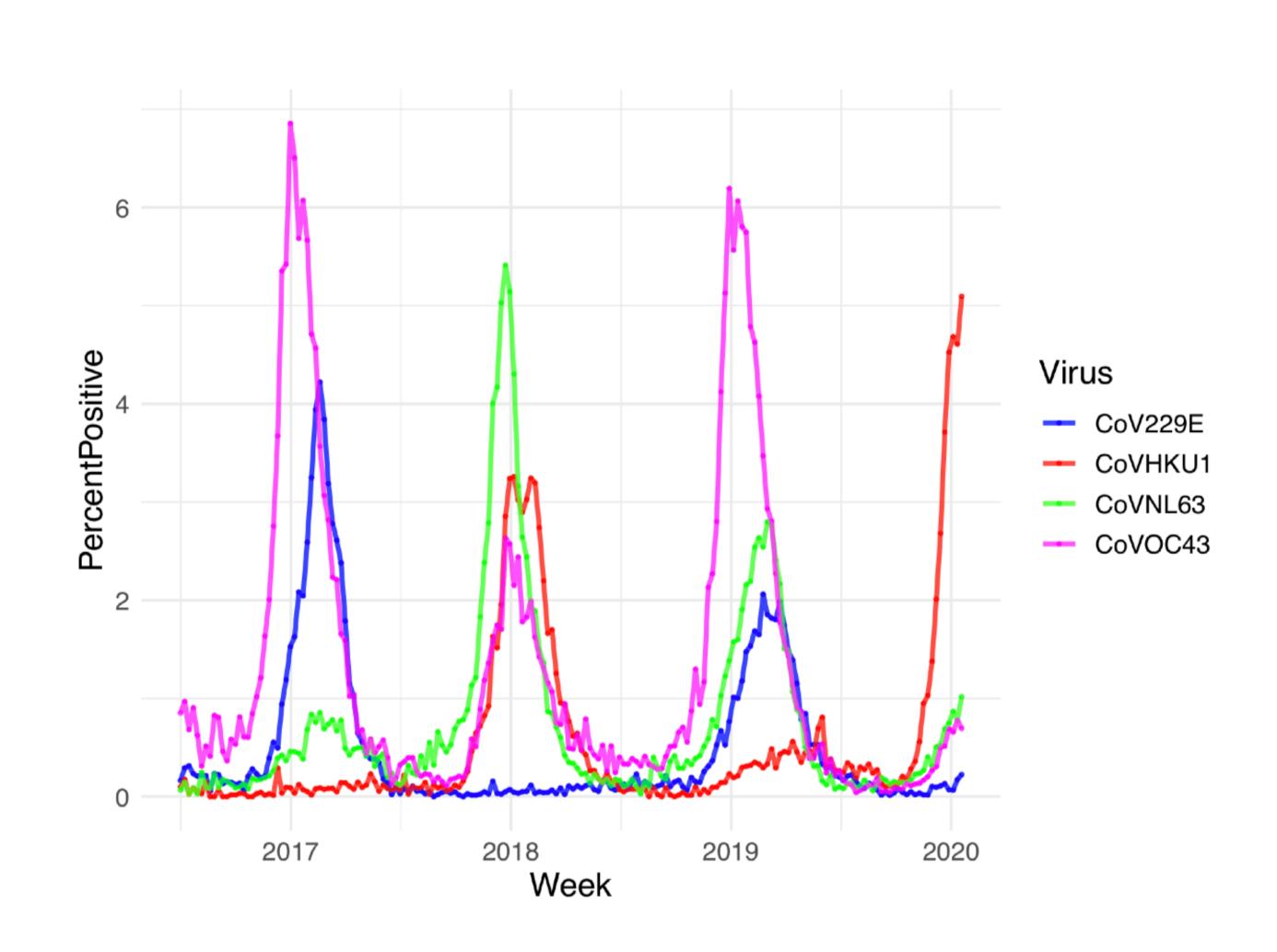
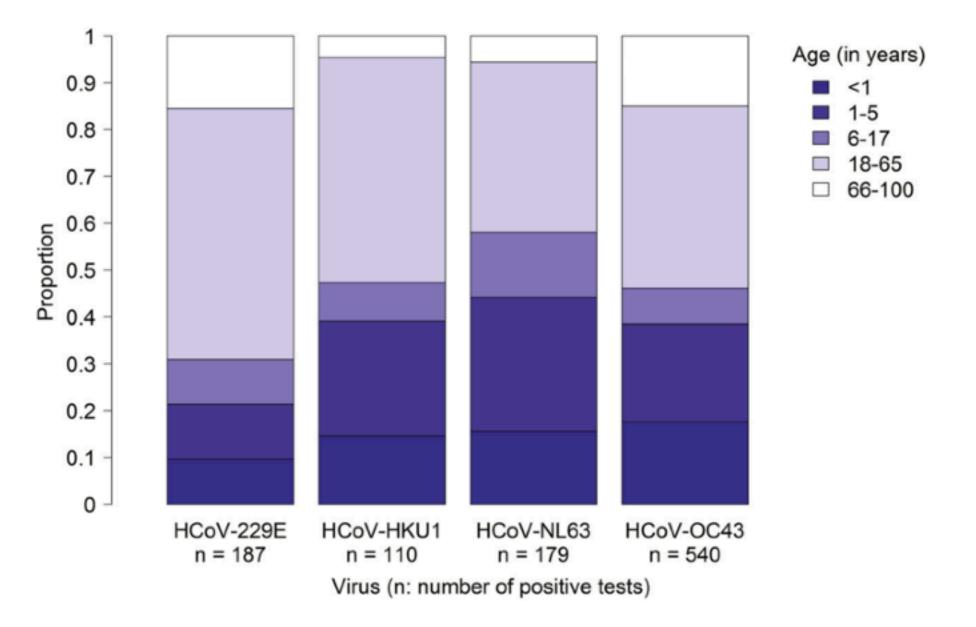
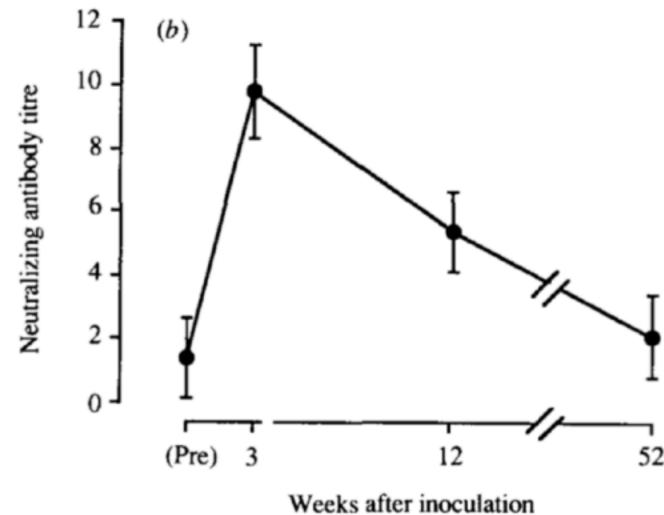
## Evidence of waning coronavirus immunity







Killerby et al. (2018), Journal of Clinical Virology



Callow et al. (1990), Epidemiology and Infection

Pre-modeling

## **Key questions**

- Will SARS-CoV-2 spread in the summer months?
- Will SARS-CoV-2 enter into long-term seasonal circulation?
- How would cross-immunity from the other coronaviruses affect the pandemic?
- If we can't answer these questions now what information do we need?